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ARE THERE THINGS IN THEMSELVES?

THE proposition that things in themselves cannot be known, has often, and perhaps justly, been proclaimed as the central idea of Kant's philosophy. Kant concludes the first section of his "Transcendentale Elementarlehre" with this "critical admonition":

> "That in general nothing which is intuited in space is a thing in itself, and that space is not a form which belongs as a property to things; but that objects are quite unknown to us in themselves, and what we call outward objects are nothing else but mere representations of our sensibility, whose form is space, but whose real correllate, the thing in itself, is not known by means of these representations, nor ever can be." ("Kritik d. r. V." § 4.)

The term "thing in itself" means originally the object as it is, independent of the thinking subject's cognition. For instance: A rainbow appears in the clouds; the rainbow is not a thing in itself, but the appearance of a thing in itself. The rainbow exists in man's sensibility only. The colors of the spectrum, indeed all colors, the colors of the sky, of the clouds, of trees, of living beings, are sensations only; they are subjective phenomena, they are certain kinds of feelings representing objective realities, but they are not these objective realities themselves. They are perceived in the brain and are projected to a place outside the organism. The rainbow, as it is seen, is not a thing, but it is something seen, it is an appearance only. And this is true of all things seen and heard and perceived by any one of the senses. The sense-pictures are localised in space, they are projected outside to a spot where the combined experience of the senses has taught a sentient being to expect them.

But all the objects of the objective world as they are perceived are and remain subjective sense-perceptions. The world of our senses around us is woven of our sensations. It is mere appearance. This is not a question concerning which there is any doubt, this is simply a matter of fact. But the question arises, "Can we know things as they are independent of sensation? Can we know things in themselves?"

The physicist and every scientist is engaged with the problem, What are natural phenomena independent of sensation? Light is a sensation of vision, but what is the objective process that takes place when a human eye perceives light? The physicist answers this problem by eliminating in his mind the sense-element and by describing the facts of the process in terms of matter and motion. His answer is that light, objectively considered, is a certain vibration of the ether. If we can rely upon physical science, the thing in itself of a rainbow would be a certain refraction of ether-waves. These vibrations of the ether-waves are transmitted from the sun, and being broken in the falling raindrops actually take place independent of cognition, they are real whether we look at them or not.

The ultimate aim of science is a description of the natural phenomena not in terms of sense-elements, but in terms of form. That feature of a thing which we call its matter, constitutes its reality, but the form of a thing, of a motion, or of a process makes the thing that which it is; every act of causation is a change of form, and the forms of things are determined with the assistance of the operations of purely formal thought, i. e. through measuring or counting. Such is science, not only as it ought to be, but also as it actually is. All our scientists, each one in his field, are consciously or unconsciously working out a solution of this problem. And a solution of this problem means, in our conception, the objective cognition of the world—i. e., a description of the natural processes as they are independent of sensibility.

Kant knew very well that a description of things and of natural processes in terms of form was possible. He clung, nevertheless, to the proposition that things in themselves are unknowable. And why? A description of things and of natural processes in terms of form was in his opinion not as yet a description of things in themselves, for—and here we are confronted with the original idea and the fundamental error of Kantian thought—Kant did not consider the forms of things as an objective quality of theirs, he maintained that the formal element is purely mental and merely subjective. The thinking mind, he declared, attributes them to the object. Space and time, the pure forms of existence, together with all other forms, such as causation, are, according to Kant, not qualities of the objective world, but of the thinking subject. The thinking subject cannot help viewing the world in the form of its own cognition, it transfers these forms to the objects. Therefore the thing in itself according to Kant would not be represented in a description of the thing purely in terms of form, the thing in itself would mean the thing as it would be, independent of time and space.

Let us here point out a distinction between the thing in itself and noumenon. Noumenon means "a thing of thought." The noumenal world is the world of thoughts in a thinking being's mind. The noumenon must not be identified with the thing in itself. The two terms are often confounded, but they have to be distinguished. The idea of reflected ether-vibrations is a "noumenon," but the reflected ether-vibrations themselves, the objective process are a thing, i. e. an objective reality, and in so far as they are a reality, considered as being independent of sensation, we may call them "a thing in itself." Now when Kant denies the objectivity of time and space, he must, implicitly, also deny the objective validity of a description made in terms of measuring and counting. The pictorial world of our sense-perception is subjective, it is built up of sensations, it is not objective; and the world of thought is the attempt to reduce the subjective world of sense-imagery to terms of objective validity, i. e. to terms of form. But this world of thought is according to Kant purely mental, it is purely noumenal, or, in other words, noumena do not represent things independent of cognition, they represent things as our mind thinks them. The sensory world is mere appearance, it is a subjective phenomenon, but the world of thought, says Kant, is no less subjective, it is a world of thought which describes things in terms of purely mental properties and not in properties of the things themselves. This is tantamount to the proposition, that things in themselves cannot be known.

The term "thing in itself," in the sense of a thing as it is independent of sensibility, would better be called "the objective thing," and we shall so call it when we wish to distinguish it from Kant's thing in itself. The objective thing is the thing, not expressed in terms of subjective elements, such as feelings or sensibility, but in terms of objective elements, i. e. in terms of form. That a description of things in terms of forms is possible has never been denied either by Kant or by any Kantian; but they deny that these descriptions are anything more than mere noumena; Kant and the orthodox Kantians deny that they represent the things as they are in themselves. Thus the term thing in itself in the Kantian sense comes to mean the thing as it is independent of space and time.

That every noumenon is a mental sign is a matter of course; the noumenal world is ideal. But we maintain that these mental signs represent real qualities of the objective world; they have a meaning; the things represented by them are actual features of reality. Kant denies this. To him the noumenal world is purely noumenal. To Kant there is no space outside the space-conception, and so he declares that space is ideal; it is not an objective quality of things. However, we maintain, that our space-conception describes, i. e. depicts, or represents space, our space-conception is ideal, yet space is not ideal but real; it is an objective quality of the world.

Kant's view is dualistic, or at least necessarily leads to dualism, and it appears to rest on an unpronounced dualistic assumption. Kant treats "the subject" as something quite distinct and separate from "the object." If he had borne in mind that the subject is always at the same time an object, he would have treated both subject as well as object as mere abstractions of one and the same reality. Resting upon this erroneous presupposition, Kant's most consequential mistake, in our opinion, was his conception of what he called "the ideality of time and space." If time and space were purely ideal, purely mental, purely subjective, then indeed, the things as they are would forever remain unknown to us, then indeed the thinking mind would be as if shut up within a hollow globe out of which it could never escape, then indeed the world would be divided into two parts, the objective world, and the subjective world; and the gap between both could never be bridged over. The thinking mind would have within itself a noumenal world built upon the subjective elements of sense-impressions. This subjective world would possess no objective value, it would not describe realities, and the objective world would thus be unknowable, inscrutable, and mystical.

The idea of a thing in itself found another support in a mistaken conception of the unity of certain things, especially of organisms. The unity of a combination of parts is not merely the sum of the parts, it consists in their peculiar combination which makes an harmonious co-operation possible. This unity is an additional element; it is an entirely new creation which exhibits features not contained in any of its parts. There is no latent watch contained in a heap of little wheels and cogs, the watch is created through the combination of these wheels and cogs. The unity of a thing is its form, consisting in a special arrangement of its parts; and this form although not material is nevertheless real.

The materialistic conception overlooks the importance of form; but the spiritualist and also the transcendentalist materialise it as some spiritual substance, as entities or independent existences. They are in this way as much materialistic as the materialist.

The question has seriously been asked, What is a melody in itself. The question has sense when we understand by it, What are those new qualities which appear through a certain combination of sounds? Those qualities are not nothing, they are something quite peculiar. We call one of them rhythm, another one is the fixed succession of notes of a different pitch. The qualities of a melody as a whole are not qualities of its separate parts; yet therefore the melody is not a thing in itself. We might just as well speak of a watch in itself, meaning thereby that peculiar unity of the combination of its parts which makes of them a watch. But if we thus speak of "the watch in itself," we must be aware that this idea has not somewhere in a transcendental fairy-land an independent existence above space and time, and outside of its parts. The unity of a certain interacting group of parts is, on the one hand, no mere addition of the thinking subject, it is not purely noumenal, it is real and objective; on the other hand it is not a thing in itself, independent of its parts, it is the product of the relations in which its parts affect one another.

Is not perhaps the basis of these vagaries a mistaken conception of language? We call a certain sensory picture a tree and we say, the tree has roots, a stem, branches, leaves, and fruits. Autumn sets in and the wind shakes the leaves off the branches. Now we speak of a leafless tree. We cut the tree down and we speak of a rootless tree. We burn the trunk and the branches, and the tree as a phenomenon is gone, all its properties are taken away. What remains? The tree in itself is left, but the tree in itself does not exist. If all the property of a person is taken from him, the person himself is still left. The properties of a tree, however, are not properties in the same sense; they are qualities. If all the qualities and parts of a tree are gone, if only the tree in itself is left—then there is left nothing but the empty word tree, the idea of a tree.

II. KANT'S VIEW OF SPACE AND TIME.

Let us briefly consider the ground upon which Kant bases his view of the ideality of space and time. Kant asks:

> "What then are time and space? Are they real existences? Or are they merely relations or determinations of things, such however as would equally belong to these things in themselves, though they should never become objects of intuition; or *are they such as belong only to the form of intuition, and consequently to the subjective constitution of the mind,* without which these predicates of time and space could not be attached to any object?"* (Kr. d. r. V. § 2; "Meiklejohn," p. 23.)

We should say, to state our opinion briefly, that space and time are not "real existences," i. e. they are not concrete objects, but they are real nevertheless; they are not material things, not thingish realities, yet they are objective properties of things. They are the forms of things and processes, and belong to the things whether they become objects of cognition or not. In this sense, they actually belong to the things in themselves, viz. to the objective things.

Kant argues that space and time are not conceptions derived from outward experience; they have not been abstracted from sense-impressions. They are necessary representations *a priori*, they are not discursive ideas or generalisations, for there is but one space and one time, space being represented as infinite and time as eternal.

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* Italics are ours. Kant affirms the italicised question.

From these arguments Kant draws the conclusions that space and time do not represent qualities of an object but that they are the form of all sensory phenomena, space being the form of the external, time of the internal sense. In other words, space and time belong to the subjective condition of the sensibility and not to the objective world.

We answer that our conceptions of space and time are after all derived from experience. Space and time are abstractions. There is no time in itself. There is no space in itself. Space and time are not directly derived from outward experience, nor are they derived from the sense-elements of experience. Inner experience, i. e. reflection to the exclusion of sense-impression, the experimenting with pure forms, will lead to the construction of the concepts of space as well as of time. Space and time, magnitudes and numbers having been constructed in the mind of a thinking subject are applied to practical experience. When counting three trees we do not abstract the number "three" from the three trees, but we apply to them the system of numbers in our possession.

Says Kant:

> "We never can imagine or make a representation to ourselves of the non-existence of space, though we may easily enough think that no objects are found in it. It must therefore be considered as the condition of the possibility of phenomena and by no means as a determination dependent upon them and is a representation *a priori*, which necessarily supplies the basis for external phenomena."

Space being the generalised concept of extended form, and time that of motion without reference to any contents, it is naturally impossible to think the non-existence of space and time. Thinking is an act, it is a process; and any act, any process, any event, is a reality which implies or presupposes the existence of the forms of reality. We can think of matter without reference to form, i. e. we can have the abstract idea of matter; but we cannot think that there is any matter void of form. This does by no means prove that form has nothing to do with matter. On the contrary, it proves that form and matter are inseparable. The form of existence need not therefore be called "the basis" of existence, it is simply one universal feature of existence. And the form of existence being bound up with existence itself, it is necessary that any thinking existence in so far as it is real, in so far as it is at the same time an object and part of the objective world should also be in possession of the conditions to evolve the idea of form out of itself through inner experience.

This inner experience of experimenting with pure forms is also a kind of experience. It is not a purely subjective process; it is a subjective process to the thinking subject, which to other subjects, however, would appear as an objective process. The laws of pure form as stated in the sciences of purely formal thought, are not merely subjective; they possess objective validity. It is true and from our standpoint a matter of course that the laws of form are *a priori*, which means, they hold good for any pure form.

Modern positivism, such as we defend it, is monistic. We consider the entire world as one great whole and do not forget that all noumenal representations of certain features of the world, of matter, mind, form, even of things and our own souls included, are mere abstractions. Reality itself remains undivided and indivisible. Abstract concepts are mental symbols invented to represent certain features of reality. But although we can in our mind separate these features and distinguish them from other features, in the world of reality they cannot be cut out or thought of as things in themselves. Granting the oneness of reality which dawns upon us instinctively before consciousness is fully matured, we are inevitably led to the conception that there is but one form of reality, which implies that there is but one space and one time.

III. FORM NOT IMPORTED BY THE MIND INTO REALITY.

Kant says, and in this we agree with Kant, that "all thought must directly by means of certain signs relate ultimately to *Anschauungen*." The word *Anschauung* (the "onlooking," generally translated by "intuition") means the immediate presence of sense-perception. Says Kant: "The effect of an object upon our faculty of representation is called sensation, and that intuition which refers to an object by means of sensation is called empirical intuition." For instance, I see a rose: The image of the rose which I see is the appearance or the phenomenon. Kant continues:

> "That which in the phenomenon corresponds to the sensation I term its *matter*, but that which effects that the contents of the phenomenon can be arranged under certain relations, I call its *form*."

In other words matter is that which affects the senses and form is to be expressed in relations. The difference between the formal and the material is obvious. The formal is of great importance, nay, it is of paramount importance, but the formal is neither anything apart from the material nor is it a substance. Both concepts are disparate, but they have been derived by mental abstraction from the same reality.

We fully agree with Kant when he continues:

> "That in which our sensations are merely arranged, and by which they are susceptible of assuming a certain form, cannot be itself sensation."

But we do not agree with Kant when from this proposition he derives the following conclusion:

> "It is, then, the *matter* of all phenomena that is given to us *a posteriori*; the *form* must lie ready *a priori* for them in the mind, and consequently can be regarded separately from all sensation."

Here lies the great fallacy of Kant, which rests upon an erroneous statement and an actual distortion of fact. The phenomenon of a rose which I see before me is not merely sensory, but also formal. The phenomenon, i. e. the image of the rose (*die Anschauung*) is a sensation of a special form. The term sensation as it is generally used implies its having a special form. Accordingly the form does not, at least not from the beginning, lie ready *a priori* in the mind; the form is given together with the sensation.

Kant speaks of "that which is annexed to perception by the conceptions of understanding," as if our understanding added the formal out of the mind to the sensory elements given by experience. What is the mind? The mind is a product of the world; it is a system of symbols representing the things of the world and their relations including such possible relations as are worthy of aspiring for. In short, the mind consists of ideas and ideals.*

It has often been said that the mind is the creator of the sensory and noumenal world. This is incorrectly expressed, for mind *is* the sensory and noumenal world itself. The sense-pictures, the thought-symbols, and the ideals of a man are actual parts of his mind. They are not products but constituents of his mind. Their organised totality is his mind itself. The activity which takes place in a mind, i. e. the combining, the separating, and recombining of memories, thoughts, and ideals are the actual realities, and if we speak of a man's understanding, or reason, or any other so-called faculty, we have to deal with abstractions. The activity of mentally separating form and matter might be called by the general term understanding. However the faculty of understanding is not a distinct mental organ, it consists in the single acts of understanding, and the word understanding is a mental symbol representing them all together as if they were one thing.

And certainly these acts of understanding as little import the formal into the world of sensation as the miner carries the metals into the mines. The formal, the relational, or the *a priori*, is first extracted out of the data of experience not otherwise than iron is gained out of the ores. The ore is not iron but it contains iron, the phenomenon of a rose is not purely a sense-impression, it is a sense-impression of a certain form. We are aware of the fact that mind is an entirely new creation different from the non-mental world, yet at the same time we maintain that the elements from which mind develops are the same as the elements of the non-mental world. Nature furnishes the entire raw material and whatever new creation the product of a new development is, nothing can be added to the raw material, of which the formal is the most indispensable part.

The raw material of sensory phenomena as soon as it is worked out, and also the activity of working it out are called mind. Mind accordingly originates with the appearance of sentient substance as the organisation of feelings and the memories of feelings—these memories being conditioned through the preservation of the form of sentient substance. Mind is not something different from the world but must be considered as its product and highest efflorescence. Mind is made of the same substance as the universe and the mind-forms are the forms of objective existence.

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* The problem of "The Origin of the Mind" having been the subject of a former paper need not be discussed here. See *The Monist*, Vol. i, No. 1, p. 69-86, and *The Soul of Man*, pp. 23-46.

As soon as a system of forms has developed in a sentient being, thus constituting its mind, this system can again be referred to the objective forms of things. In this sense we can say with Kant, that the understanding imports form into phenomena ; and this re-importation, this referring the objectively formal to the subjective system of formal thought, is an essential element in cognition.

IV. PROFESSOR JODL'S VIEW OF THE THING IN ITSELF.

The idea of a thing in itself independent of space and time and the unknowableness of the thing in itself are the basis of all agnosticism. And an agnostic tendency is at present predominant even among positive workers and thinkers. Agnosticism is still the philosophy of the day even among those who have surrendered its basis (which is Kant's transcendental idealism) and accept the monistic world-conception. Friedrich Jodl, professor at the University of Prague and author of the well-known "History of Ethics," in answer to a letter of mine formulates in concise terms this modernised view of a thing in itself. He writes:

"You are right. The thing in itself is a dangerous idea,—one that easily leads astray. But so long as we have no better expression to represent the relation for which it stands we shall have to use it. You also accept the following three momenta: (1) Objective existence or reality. (2) Effectiveness of Reality upon consciousness, i. e. sensation. (3) Effectiveness of sensation upon consciousness and reproduction of sensation in consciousness, i. e. representation. Nobody, however, can maintain that in sensation, and still less in representation, the whole of reality will appear in consciousness. First we learn from history what progress has been made in the cognition of reality and secondly it is obvious that we are infinitely far from an actual comprehension of reality. We have strong reasons to suspect that there are many processes in reality which in no way affect our sensibility and cannot enter into consciousness, and we know for sure that we do not comprehend—i. e. reconstruct from them assumed causes—many things, indeed most things, which we observe

> in their effects. Our cognition of nature, if we begin to construct, always leads us to some x. It may be doubted whether this x is an unknown or an unknowable. In my opinion it is both—anyhow we cannot eliminate it.
>
> "I am convinced that many things which are unknown to-day and appear as unknowable will be known and knowable in a thousand years. But I doubt whether the total mass of the Unknowable has been noticeably diminished. For the Unknowable is infinite and the infinite if divided by any finite number can never produce a finite number. Every solved problem contains new and greater problems. What shall we call this? I believe that the term "thing in itself" is after all the best expression. Whoever wants to turn a mystic on account of it cannot be prevented. This state of things can be brought out of existence by an act of violence only."

It is most certainly true, as Professor Jodl says, that sensations do not depict the whole of reality. But why should they? Cognition is possible only by limiting the attention to a special point. Every sense-organ is an organ of abstraction. Every sense depicts the effects of reality in its own way and in this way alone. It may freely be granted that there are many processes in reality which do not affect our sensibility. Yet there is nothing in reality which does not affect something in some way. If it did not, it could not be said to exist. The chemical rays of light do not affect our eye, they are invisible and were for that reason not noticed. But these rays are not without any effects. If we cannot observe them directly, we can invent sensitive plates or other instruments for observing their effects indirectly. Indirect observation makes it possible that the limitation of our senses does not result in a limitation of knowledge.

Says Professor Jodl:

> "Our cognition of nature if we begin to construct always leads us to some x."

This sentence indicates that Professor Jodl's and our conception of cognition are different. Cognition is not a reconstruction of assumed causes; it is a unification of our representative sensations or ideas. Something is again noticed, it is re-cognised, to be the same thing. Cognition is adaptation of new facts to our present stock of knowledge; it is the proper arrangement of new data in our system of mental representations. Cognition, accordingly, is the reduction of the unknown to terms of the known. How can it ever lead to an x? The positive conception of cognition is, as Kirchoff defines, it "an exhaustive and most simple description of facts." It is a reconstruction of facts or, as Mach says, *Ein Nachbilden der Thatsachen.* Cognition is based upon *Anschauungen;* it will lead to an ultimate x, only in case we expect that cognition instead of being a description of facts will have to give us information about how it happens that facts exist, how they originated out of nothing.

Professor Jodl's thing in itself is not outside of Space and Time (as is Kant's thing in itself) but it is the overwhelming infinitude of problems to be solved with which we cannot hope to get through even though our life lasted billions of light-years. Let me repeat here what I said in the second edition of "Fundamental Problems,"

> "A philosophy which starts from the positive data of experience, and arranges them in the system of a monistic conception of the world, will meet with many great problems and in solving them will again and again be confronted with new problems. It will always grapple with something that is not yet known. The unknown seems to expand before us like an infinite ocean upon which the ship of knowledge advances. But the unknown constantly changes into the known. We shall find no real unknowable wherever we proceed. The idea of the unknowable is like the horizon—an optic illusion. The more we advance, the farther it recedes. The unknowable is no reality; the unknowable can nowhere prevent knowledge nor can the horizon debar a ship in her voyage, from further progress." (p. 271.)

Man's knowledge has value as positive information concerning the facts he has to deal with, and the infinitude of the not known, the infinitude of other problems and things which he will never face, is of no consequence whatever. Positivism commences and has to commence with the positive facts of the given experience and not with the infinitude of possibilities which lie beyond our horizon. Compare knowledge to property and suppose a man is to buy a farm. Shall we discourage him with the idea that the whole amount of soil on the surface of the earth and of other planets is infinite, and this infinitude of all existences if divided by his finite little possession can never result in a finite number. Even if it were doubled, if it were multiplied a thousand times, it remains as good as nothing in comparison with the rest of the world which he cannot acquire. However, his possession is something to him, whatever the relation of infinite possibilities may be in proportion to it.

The concept of infinitude serves a good purpose in its place, but we cannot use it for analogies in other fields or bring it in relation to concrete realities. We produce confusion and drop into mysticism as soon as we handle the idea of infinitude as if it were a positive thing. The infinite is a function which is mathematically expressed by $\frac{1}{0} = \infty$, and whenever we bring anything in relation to the infinite, we at once dwarf the greatest number no less than the smallest number into zero.

Clearness of thought is the indispensable method of sound philosophy for constructing a positive world-conception, which in great outlines is a description of the facts of reality. By suffering mysticism as a legitimate conception either in science or in philosophy, we enhance the interests of those who prefer the chiaroscuro of vague notions to clear thought.

V. CLIFFORD'S AND SCHOPENHAUER'S CONCEPTIONS OF THE THING IN ITSELF.

When Clifford speaks of things in themselves he does not mean Kant's thing in itself, he means neither the object independent of the thinking subject nor the thing independent of space and time. He means the thing as it would be if viewed from the thing itself.

A man appears to other thinking beings as an active body, as an organism that is in motion ; but to himself he appears as a feeling being. The subjectivity of things as they appear to the things themselves consists in our own case of states of awareness, and this subjectivity is called by Clifford the thing in itself.

A certain brain motion is in its subjective aspect a feeling. This feeling is according to Clifford the thing in itself of the visible, observable, and measurable motion. The thing in itself of so-called inanimate beings is not feeling, but elements of feeling. In other words, the world-substance is everywhere in itself potentiality of feeling and Clifford therefore calls it "mind-stuff."

Schopenhauer arrives at his conception of the thing in itself practically in the same way. There is the world as it appears to us, the objective world of motion in space and time. What the kernel of this world may be, we can know from self-observation. The kernel of ourselves, Schopenhauer says, is Will ; and the will is also the kernel of things ; the will is the thing in itself.

We understand by will the passage into action, i. e. an incipient motion of the organism if accompanied with the psychical element of consciousness, and this consciousness is a state of awareness of the will including its direction and aim. Will, as the the term is generally used, is always conscious. Schopenhauer however speaks of the will as being blind, i. e. without knowledge, without awareness of itself and its aim. This indicates that he uses the word not in its original but in a figurative meaning.

The fall of a stone may be characterised as a blind motion without awareness and without the stone's having a consciousness as to its direction or aim; and in a similar (although not in the same) way Clifford speaks of the elements of feeling as being not rational. We agree with Schopenhauer that that factor in a stone which makes it fall when placed in a certain position is as much a natural process as the act of a man, only of a lower grade and a simpler kind. Schopenhauer calls that which both have in common "will." Yet in common language we call the objective aspect of that which both processes have in common, "motion." What then is the subjective aspect of a falling stone? It is not a state of awareness, it is no feeling, but it is the potentiality of a state of awareness, it is potential feeling. There *is* a subjective aspect, but this subjective aspect is so far as we can judge of no account to the stone.

That something in the stone which corresponds to man's consciousness, viz. the stone's subjectivity, is not mind, but it is potential mind. And potential mind is not as Mr. Conybeare expresses it "mind diluted," potential mind is no mind at all.

The world-substance as it exists in inorganic matter is not mind. But the universe taken as a whole, the All, is for that reason not less than mind. On the contrary, it is infinitely more than mind. The All is not brute force and inert matter only, the universe is a cosmos, and its subjectivity necessarily develops, according to the laws of form which characterise the cosmos throughout, into mind. We disagree with Professor Clifford most emphatically when he describes the mind-stuff of which according to his terminology the world consists, as not rational.

The world it is true is not rational in its elements, but the world as a whole, the entire cosmos with its laws and especially in its formal order, is the prototype of all rationality. Human reason is rational only in so far as it conforms with, as it reflects, as it describes the order of the cosmos. The human mind is a microcosm. We do not call the macrocosm, in whose image the microcosm has been created, a mind, because we understand by the term mind not reality itself but reality pictured in symbols of feeling. We understand by mind the individual conception of the world as it is mapped out in the brain of a sentient being, and not the universe itself, not the all-being. We understand by mind a creature and not the creator, a soul and not God.

The cosmos, the All, God, that which creates the mind, is not dead, not irrational, and not inferior to mentality. It is the source of all life, it is the condition of all order, it is the standard of all morality. All the minds that exist are but parts of it. In it, with it, and through it we live and shall live forever. For although we shall die, our being can never be blotted out. Existence knows no annihilation and life knows no death. What we call death is a dissolution of life in a special part, but the contents of a life, the thoughts, the ideas, and the ideals are preserved and transmitted, they are implanted into other minds ; the soul continues to live. And this continuance of the life of the soul is not a mere dissolution in the All, it is not the immortality of force and matter ; it is the preservation of its special existence, of its most characteristic and individual features for an immeasurably long period hence, which will last as long as the conditions of life remain favorable upon earth. Yet even if a whole solar system were broken to pieces, life will reappear ; mind will be born again to struggle for truth and to aspire to live in conformity with truth.

VI. THINGS AND RELATIONS.

The proposition that things in themselves are unknowable finds a strong argument in the statement that we can know relations only, that all knowledge is relative. It is undoubtedly true that all knowledge is relative and knowledge is a knowledge of relations. But what is a relation? When I once proposed this question, I was answered:

> "A relation is the connection between two things; it is that something in which the one stands to the other, in short, it is the betwixtness of things."

This is exactly what a relation is not. From such a definition of relation agnosticism will necessarily follow. It is a misstatement of the case, and when we come to follow out the idea, we shall be led into inextricable contradictions, and unless we revise the whole argument, we shall have to confess that we are at our wit's end.

The question, What is a relation? was one of the issues between the two great mediæval schools of philosophy, the Nominalists and the Realists.* The Nominalists answered: "A relation is a mere product of the mind," while the Realists declared that "a relation without which the thing cannot be, is in the thing."

Both schools relied upon Aristotle's authority. Aristotle had declared that matter is mere possibility of existence (it is *δυνάμει ὄν*) and form is that which makes it real, the formal is the real, form is existence or being (*οὐσία*). The metal of a statue, Aristotle says, is its matter, the idea of the statue is its form, both together make the real statue. The metal having had another form before, did not exist with the inherent purpose of being this metal of the statue. The metal is the mere potentiality of becoming a statue.† Hence, says Aristotle, not the matter but the form constitutes the reality of the statue, the form is that which is real, or that which makes actual, *ἐνεργείᾳ ὄν*, it is the being in completeness or actuality, *ἐνετλεχείᾳ ὄν*, i. e. that which makes a thing exist in its purpose (*ἐν τέλει ἔχειν*). If the formal alone is and makes real, relations must be real. This is in favor of the Realists.

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*It is scarcely necessary to mention that mediæval Realism is different from modern Realism.

†Aristotle's idea of matter being potential existence is a fiction. Fictions of that kind are useful for certain purposes, but we must not forget that they are fictions. We might just as well introduce any other system of fictions. For instance we might with certainly not less propriety look upon the idea in the mind of an artist as potential reality while its appearance in a material shape is conceived to produce actual reality.

Yet Aristotle's philosophy is not in every respect clearly worked out. In fact there are two Aristotles, the one being a Platonist, the other a naturalist, the one believing in universals, the other investigating concrete things and taking individuals as real beings. But both Aristotles and with them both parties of the schoolmen had no clear conception of the nature of ideas, what they are, and what they purport, and how we can discriminate between their subjective and objective elements. Ideas have a meaning. Is their meaning purely mental or has it an objective value? We say that it has.

The same Aristotle who considered the formal as that which makes real, denied the objective existence of relations. He said that such qualities as greater, or smaller, double or half, indeed all relations (the *πρός τι* of things) did not belong to the things, but were added to them by the thinking subject. Ergo relations are mere products of the mind, they have no objective value. This was in favor of the Nominalists.

Now it is true that some relations are purely mental in so far as the comparison upon which they rest is purely imaginary. An answer to the question, Who was the greater, Alexander or Cæsar? depends upon the standard of measurement which we create for the special purpose. Some such relations have no objective value, they are not facts but a play of imagination dependent on the recognition of the standard of measurement. But how is it, if we express the relation between the gravity of a stone and the whole mass of the earth as it manifests itself in the stone's fall? Is that also a mere product of the mind? Certainly Newton's laws describing gravitation in exact and mathematical formulas are a product of the mind, but this product of the mind has an objective value, it has a meaning, it describes facts, and these facts are certain relations between certain things.

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The fault of the modern misconception of relativity lies in the assumption that the two or more things are considered as things in themselves. We are apt to consider the gravity of two masses, of a stone and of the earth, as a relation between two independent things. Here is the stone and there is the earth and the relation is considered as some third item, being the connection in which the one stands to the other.

In reality there are not two things and, in addition to them a betweenness of the two things. The world is not a sum of things, not even a system of things, but a whole indivisible entirety and what we call things are abstractions which serve special purposes in the household of cognition. All things consist as it were of innumerable relations to all other things. When we abstract one special process which takes place in the province of what we are wont to call *two* things, we have to deal with a relation.

There are no relations of themselves and there are no things of themselves. Relations describe certain features of reality obtaining between what we call two or more things, and in this description all other features of which the real things consist are purposely omitted.

There is no quality of things but it is at the same time a quality of relation. Every quality of a thing characterises it under a certain condition; it appears as an effect upon something and thus it is actual as a relation. Cognition analyses things into bundles of relations and all these relations together make up the things.

The modern idea that we can know relations only and that there are things in themselves which are unknowable is an old error inherited from mediæval scholasticism, and its roots can be traced back to the philosophy of Aristotle. The difficulty disappears as soon as we consider the whole world (ourselves included) as an interacting whole, and that the conceptions "things" and "relations" have been invented for describing certain of its parts and certain of its interactions or interconnections.

If we push the idea of things in themselves to the ultimate extreme we arrive at the atomistic conception of the universe. *Atoms are the things in themselves reduced to the point system.* If we consider the world as a heap of innumerable atoms, we are at a loss how to explain the interaction among these atoms. The atomist universalises the substance-abstraction and will be disappointed afterwards not to be able to deduce from his universalisation other qualities which are found in reality, such as the relations of things, their interconnections, their spontaneity of motion, the life of organised beings, and the mind of thinking creatures.

Ideas are symbols and symbols have a meaning. The whole realm of mental representations may be viewed in their symbolism or in their significance. Considering their symbolism, ideas of things as well as of relations, are products of the mind, considering their meaning, ideas represent realities; in other words: their contents or that which they signify is real.

It appears that neither Nominalism nor Realism is right; yet if we stretch them only a little, if we are allowed to interpret them in the light of a monistic world-conception, both are right. They cease to be contradictory and become complementary. Universals are real, say the Realists, i. e. the forms and relations of things are actualities. Universals are names, say the Nominalists, i. e. the relations and forms in which we describe the world are mental symbols.

The Realists had the misfortune to defeat the Nominalists entirely, and thus had a chance to insist upon being right in every respect. All opposition having ceased, the errors of Realism grew in extraordinary exuberance. Nominalism in the mean time raised its head in opposition to the recognised authority of the church as well as the schools, slowly yet powerfully and irresistibly. The errors and the tyranny of Realism gave strength to the Nominalistic movement which reached its height in Kant's philosophy. The Realists had gone to the extreme of declaring that universals were things, real substances, independent of single and concrete objects, and the Nominalists on the other hand, represented by Kant, went so far as to declare that all relations, time and space included were *mere* products of the mind.

If the relations are mere products of the mind, all knowledge being a knowledge of relations, knowledge becomes impossible. That last consequence was drawn by Kant and is emphatically insisted upon by agnosticism.

There is but one world-conception that can dispense with these conclusions: it is that view which conceives of the All as a whole; and of knowledge as a description of its parts, qualities, and relations, ever mindful on the one hand that the parts are parts, that qualities and relations are certain features only, not entire realities, or isolated entities, and that the symbols thereof frequently overlap each other; on the other hand that there is nothing absolute,* and that there are no things in themselves.

The relativity of knowledge, whether we conceive of it as the relativity of the object to the subject in general or as an appreciation of the fact that all knowledge gives and can give information of relations only, does not lead to the conclusion that knowledge is impossible. Relativity is a fundamental feature of knowledge, and we shall understand that it must be so if we consider that reality itself is a great system of relations.

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The interconnection of all things with all things appears to be so complete, that if we intended to explain or understand one single fact fully and exhaustively in all its relations, past, present, and future, we should be obliged to give a complete description of the universe. Says Tennyson:

> "Flower in the crannied wall,
> I pluck you out of the crannies;—
> Hold you here, root and all, in my hand,
> Little flower—but if I could understand
> What you are, root and all, and all in all,
> I should know what God and man is."

We might address in the same way anything else, an atom of hydrogen, a grain of sand as well as the sun, the action of a tiny speck of irritable protoplasm as well as the soul of man.

VII. IS THE EGO A THING IN ITSELF?

Prof. Lloyd Morgan in his excellent work "Animal Life and Intelligence" uses repeatedly the word "mind" as if it were a thing in itself. Professor Morgan is a monist and he does not intend the word to mean a thing in itself; yet such is the influence of language that we, all of us, unless we are constantly on our guard, will inadvertently slip into dualistic expressions. Professor Morgan says, with reference to certain sensations of animals (p. 309) :

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* The term "absolute" is for that reason neither meaningless nor redundant. It denotes a certain method of viewing things, but is not an objective quality of things.

> 'From these stippled sensations the mind in all cases elaborates a continuum.'

The unity which arises out of stippled sensations and which through their interaction becomes a continuum is called mind. To speak of mind as working out the continuum is mythological language, it is the transformation of the abstract idea "mind" into a real and independent thing whose existence is conceived to be independent of the reality from which it has been abstracted.

Again, Professor Morgan says : "Our constructs are literally our handiwork." Our constructs, i. e. our mental signs constructed to represent realities, constitute our soul; they are we ourselves.

Professor Morgan, as I understand him, does not believe in a mind behind the psychical facts of mental activity, he does not assume the pre-existence of mind to the continuum elaborated. His view of mind appears to be the same as ours. The more noteworthy, then, is his usage of the term "mind." It is a remarkable instance of how language naturally inveigles us into a belief in things in themselves. Words seem to denote concrete existences and as soon as we use words in this way we are entangled in dualism.

Prof. F. Max Müller as well as the late Prof. Thomas Hill Green, the founder of the Oxford transcendentalist school, start from this assumption, that man's mental activity is performed by a something which is quite distinct from it. This something is the thing in itself of the human soul. Prof. F. Max Müller says :

> "If mind is the name of the work, what is the name of the worker? . . . . It is what we may call the ego as personating the self; it is what other philosophers call the monon. Let us call therefore the worker who does the work of the mind in its various aspects, the Monon or the Ego."

This conception which asks for the worker of the work is based upon a materialistic view of the human organism. An organism is not a dead machine which must be set a-going by somebody who attends to it. Organisms are active and not passive, they are living and not dead. Every part of an organism is a worker and so is the whole. And if we speak of its "life" we must bear in mind that "life" is an abstract which denotes a certain inseparable quality of the organism. The work and the worker are two abstracts of one and the same thing. The reality from which these terms have been abstracted is "something working." This something working does not consist of a worker and his work, but the worker is in every part of his work. The worker of our mental activity is the work itself. Both are identical.

The objection is made: "Whence does the activity come which appears in the realm of organised life." The answer is: Activity is a universal quality of all existence. There is no such a thing as absolutely inert matter. Every chemical element combines with other elements spontaneously, according to its inherent nature and not through the influence of a worker manipulating its atoms. Spontaneity is a universal feature of reality. Nature is throughout self-working activity. And this its most remarkable character is preserved in its highest efflorescence in the soul of man.

The present number of *The Monist* contains a lucid presentation of the transcendentalist position by Mr. F. C. Conybeare, an Oxford scholar and a personal disciple of Professor Green, with special reference to the views of Prof. William Kingdon Clifford. Mr. Conybeare, like Prof. F. Max Müller, assumes a Self independent of the reality from which the idea of self has been abstracted, and he attempts to prove the existence of this self as follows:

> "In truth there can be no relation of before and after between the two terms except for a self which takes note of the one disappearing and of the other appearing; and whenever we speak of things following one another we tacitly presuppose a self before whom the procession passes."

The transcendentalist adopts, in the realm of psychology, the error of atomism. If we accept the view that the world consists of isolated atoms, we are at a loss how to bring the atoms into relations; the unity of every group of atoms, every thing and every system of things will become a mystery. And if we look upon feelings as unrelated things in themselves, their connection becomes a deep problem. Mr. Conybeare solves this problem of the connection that obtains among the feelings supposed to be atomical, by postulating a relation-producing entity, called the self. He says:

> "No link is left, save a connecting self."

And this assumed entity of a connecting self or ego is taken to be "the heart and centre of reality." Reality, that which we have to deal with in real life and what is commonly called reality, appears as a second class of reality in comparison with this assumed thing in itself of our existence. The thing in itself is thus regarded as something realer than real; it is conceived to be a reality of a higher degree.

Mr. Conybeare is very explicit in the explanation of his transcendental "self." He says:

> "Feelings constitute a conscious self when they become the feelings of a conscious self and not before, for except as gathered up in the unity of a self which has [sic!] memory and remains the same throughout its differences, feelings can be neither new, nor repeated, nor joined by links."

What does "self" mean? What can it mean? What is the "unity of the self"? These are questions which have not been answered to our satisfaction by the transcendentalists. Whenever they speak of the self, they lose themselves in mysticism. Their "self" is an assumed entity which they have carefully divested of everything real and actual. Their self is transcendental and not a being of the world; it is a myth.

Let us describe the simplest possible instance of psychical activity.

An irritation takes place in some sentient substance. This irritation produces an extra-commotion. We must say "extra-commotion" because all sentient substance is in a state of constant activity. This extra-commotion causes the sentient substance to assume a certain form, and while it lasts, a certain and special feeling takes place in some part of the sentient substance. This certain and special feeling ceases, as soon as the extra-commotion, caused through the irritation, abates. There can be no doubt that certain effects of this extra-commotion remain. Its trace is left in the sentient substance and this trace is preserved in the constant whirl of the sentient being's normal activity. Now, we suppose that an irritation of the same kind takes place in the same sentient substance. This second irritation finds the substance no longer in the same condition. It finds the sentient substance prepared to receive it. The feeling which now appears is no longer a simple feeling. The second irritation causes a commotion as much as the first, and this commotion acts as a stimulant upon the trace left by the first irritation. This trace being again in a state of extra-commotion is revived and the same kind of feeling appears. Thus the second irritation is accompanied by a state of awareness in which two feelings are blended, the revival of the former feeling and the feeling of the present irritation.

The preservation of traces left in sentient substance is the condition of memory. We understand by memory the psychical aspect thereof, and the act of reviving, so that their correspondent feelings will reappear, is called recollection.

"Memory" has been the greatest stumbling-block to our psychologists as well as to our philosophers. Even modern works written from a positive standpoint treat memory frequently as a mysterious faculty of the mind. Mr. Conybeare speaks of the self as *having* memory, while in fact, memory is one of the features, indeed the most important feature, of mind-activity.

Says Mr. Conybeare:

> "Such a feeling [of the togetherness of two feelings] would involve memory and memory involves self-hood."

Memory does not involve any transcendental self-hood. True self-hood, viz. that which can reasonably be understood by self-hood, is not prior to, not the cause of memory; self-hood, i. e. the personality of a man, the organised unity of the psychical aspect of a human organism, is consequent upon, it is the effect of, memory. Self-hood is the product of memory.*

The self is also called the ego. What is the ego?

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*See the chapter "Soul Life and the Preservation of Form" in *The Soul of Man*, p. 418.

The ego is a Latin term used in philosophical language to denote the pronoun "I," and the pronoun "I" is quite a definite nerve-structure situated in quite a definite place of the centre of language. As all words, so also the term "I" is a symbol. Its general meaning is unequivocal; it stands for the name of the speaker. It stands for Mr. Brown, if Mr. Brown speaks of himself, for Mr. Smith, if Mr. Smith speaks of himself, etc.

What does Mr. Brown mean when he says, "*I* speak, *I* act, *I* will, *I* feel pain, *I* feel pleasure, *I* intend," etc.?

When Mr. Brown speaks, a certain number of word-structures in the centre of language are in a state of commotion, innervating the muscles of speech. Correspondent to this physiological process, a state of consciousness obtains, which is an awareness of the situation. When he adds: "I say this," it is again a special nerve-structure that is irritated into action and he might just as well say: "Mr. Brown says this." The idea of Mr. Brown, viz. of his own personality, is just as much an idea as his idea of Mr. Smith. The main difference consists in the fact that the idea of one's own personality is very much more important than the ideas representing other personalities.

The nervous structure representing the feeling of the idea "I" must be the centre of innumerable nervous tracts connecting it with all those activities which when performed are thought of as done by ourselves. The "I do this" is almost constantly ready to fill the present state of consciousness and to accompany any action performed through the innervation of other brain structures.

Sentient substance is not always actually feeling. It is feeling only when in a state of extra-commotion. Systems of sentient substance are called organisms; all its structures are interconnected and most so those structures in which sentiency as well as motory impulses are differentiated—viz. the nervous structures. The extra-commotions which agitate the different nervous structures, the memories of former sense-perceptions, of sounds, of words, of ideas depend upon the conditions of the moment. Now this and now another structure will represent the summit of commotion and the feeling of the strongest commotion at a given time will under normal conditions appear as the contents of consciousness. It is as it were the focus in which the attention of the whole organism is centralised. That which appears in the focus is clear and distinct, while the other weaker feelings rapidly disappear into the undistinguishable general feeling of the organism as a whole, commonly called cœnæsthesis or *Gemeingefühl.*

The centre of attention is constantly changing; yet whenever a thinking creature stops to ask himself, who is doing this? Who is willing this? Who is thinking this? the answer is given: "I am doing this; I am willing this; I am thinking this." The structure of the little pronoun "I" seems to be the most ticklish of all; it is always ready to force itself into the foreground.

The answer, "I am doing this," proposes the *totum pro parte.* The whole personality is supposed to do what a part of it is performing. The hands are executing this work; these hands of course are innervated from certain regions of the brain. Some parts of the personality are in a relative rest and have nothing to do with the work presently on hand. A commotion in a certain number of brain-structures represents the physiological aspect of a deliberation, perhaps the planning of some action. Psychologically considered certain ideas appear successively and sometimes simultaneously in the focus of consciousness. The ideas disagree and other ideas replace them until a combination is formed in which the ideas do agree. This state of agreement brings a temporary peace into the tumult of conflicting ideas; the plan is ready; it may pass into action at once, or, perhaps, the ego-structure will appear in consciousness and will quietly think: "I will do it."

When certain motory nerve-structures are innervated, they cause under normal conditions their respective muscles to contract, they produce motion. Under normal conditions the nervous process accompanying the idea "I will raise my arm" serves as an irritation upon the cortical centre of arm-raising, yet it is not the "I" that in some mystical way raises the arm. The idea "I" has as little and as much to do with this discharge of energy as any other idea. The idea "I" is not the power behind the veil that produces the will.

What is will? As soon as some plan of action is joined with the idea that it should be executed, supposing it be not counteracted by any stronger idea that it should not be done, this combination represents a will. A will accordingly is the psychological aspect of an incipient action, and it is usually, or if it is not it can always be accompanied with the thought "I will it." But this accompanying thought however is not the energy displayed in the act of willing.

The "I will it," or "I do it," or "I perceive it" being always ready to appear together with the strongest idea in the field of consciousness, the term "ego" has acquired a specialised meaning. It means that part of a man's personality which at the time is the contents of the "I will," or "I think," i. e. it is his present state of consciousness. Every organism is a coherent system and thus all the feelings of an organism naturally blend into a unity. The strongest feeling however appears in the normal state of waking in a distinct clearness thus representing a centre of consciousness.

However, whether we use the term "ego" in the sense of the idea "I" meaning the whole personality of the speaker, or in the sense of the present centre of consciousness, it designates in either case a definite reality, the origin and action of which are natural facts and as plain as any other psychological phenomena.

Neither the ego-idea nor the centre of consciousness are transcendental. The former is as little mystical as are the ideas dog, horse, man, etc.; the latter no less miraculous than any other feeling or display of sentiency.

VIII. THE EGO-CENTRIC VIEW ABANDONED.

The contrast between the old and the new psychology appears strongest in their conceptions of the ego. The former believes that the ego is "the thing in itself" of man's soul and takes it to be the centre of all psychical phenomena, while the latter looks upon the ego-idea as one idea among many other co-ordinated ideas and considers the centre of consciousness as the strongest feeling at a given time, which as such naturally predominates over and eclipses the other feelings of the organism.

The new psychology brings about a change of standpoint similar to that effected by the Copernican system in astronomy. In astronomy the geo-centric, and in psychology the ego-centric standpoint had to be abandoned. And all things seem to be upset to those who are still accustomed to the old conception. To them the physical and moral world-conceptions appear to become impossible. If the new view were correct, so they imagine, the entire universe would break to pieces. All our modes of speech are formed in accord with the old view. We speak of sunset and sunrise, and so in our daily conversation the little pronoun "I" plays a part which makes it seem as if the ego-idea were the centre of all soul-life and as if this "I" were the active agent in all acts of willing and doing.

The advantage of the Copernican system lies in this, that we can think of the motions of the sun and the planets in a systematic and unitary conception without being either involved in contradictions or obliged to invent mysterious qualities in the stars for explaining the velocities, directions, or other phenomena of the celestial bodies. The most important advantage however is the practical applicability of the new theory.

The old theory of the soul necessarily leads to mysticism. Fictitious facts of a transcendent character must be invented in addition to the facts observed, in order to explain the latter. The new theory after abandoning the ego-centric standpoint of the thing in itself of a soul shows the facts of psychic life in an harmonious and unitary conception. All facts agree among themselves and we are not in need of supplementing them with mysterious inventions. It must be emphasised, at the same time, that the new conception throws a new light upon ethics; it shows the error and perversity of all egotism, for it would be a mistake to act as if the ego were really the centre of soul-life.

Here the new psychology comes in contact with religion. What is the practical aim of all the great religions of the world but a surrender of the ego, a renunciation of the self as the centre of our being, and the acceptance of the moral law as the regulative power of our actions? The new psychology gives a justification and a scientific explanation of Christian ethics while the latter from the standpoint of the old psychology necessarily appears as mystical and supernatural.

IX. PERSONALITY AND EVOLUTION.

The ego, i. e. the centre of consciousness, is constantly shifting, while the personality of a man is relatively constant, certain important ideas being stable and thus lending character to the whole system of thoughts and intentions.

The term personality indicating the selfhood of a man is used in several ways. First, we understand by a man's personality his bodily appearance; secondly the whole system of his mentality, viz. his knowledge, his temperament, his character; thirdly the history of his life, past, present, and future; fourthly his position in life, his possessions, his connections, his influence, or at last we mean by it all these four items together. In all these applications the man and his personality are conceived as a unity. And they are a unity. Wherever the term unity is applicable, it is most certainly applicable here. All the many facts of the history of his life are one continuous process; all the parts of his body are parts of a system, and the world of his ideas also will under normal conditions bear a certain harmonious character. Wherever in any soul the concord among the ideas has been disturbed, a state of unrest will ensue until the peace of soul is restored in one or another way. But with the same necessity as every water surface tends to present a smooth level, so the ideas in one and the same soul tend to come to a state of agreement. As every water surface has its ripples so even that mind which has attained an undisturbed peace of soul is constantly confronted with some problems—be they ever so trifling—producing some slight disturbances in his life.

The unity of a self, it is apparent, is the inevitable consequence of given conditions. It is not something which exists outside the personality and its constituent parts, it is in the personality and it develops together with it. Mr. Conybeare supposes that "the unity of a self remains the same throughout." This is an error, and this error vitiates Mr. Conybeare's whole conception of growth and evolution. He says:

> "Properly speaking a thing can only be said to grow or develop when it remains the same with itself all through the process and unfolds therein capacities which were anyhow latent in it to start with."

The truth contained in this proposition may be expressed thus : When a thing develops, some part of it remains the same during the change, so that a continuity is preserved. Yet every change of a part of an organism—such is the intimate interconnection of all its parts—produces an alteration, be it ever so small, of the whole unity. And in the course of evolution the character of the whole thing may be changed. Think of the growth of a caterpillar into a butterfly, or of an egg-cell into a man. However, the changes in the character of an adult man will become slighter and slighter the stronger certain features of his existence preserve their sameness, although the most stable personality will, nevertheless, be subject to, at least, unimportant changes as long as life lasts.

Mr. Conybeare, like his master Professor Green and all the transcendentalists, is still under the influence of a belief in the thing in itself. The unity of an organism which is the product of the co-operation of its parts, is not some independent thing whose business it is to gather up their single activities and bring them into relation with one another. The unity of a self is the combination of all those relations which make of its parts a systematised whole, and this unity is changing together with its constituents ; as a matter of fact, we have to state that it does *not* remain constant or the same with itself. Mark that I do not deny the unity of the soul, nor do I underrate the enormous importance of this unity. But I do deny that this unity exists independent of its parts. It is as much immanent in its parts as is a melody in its notes. There is as little a transcendental self-hood as a melody in itself independent of its sounds.

The assumption of a transcendental unity which throughout the process of evolution remains the same with itself naturally leads to a wrong conception of what Mr. Conybeare calls "latent capacities." The terms potential existence and latent qualities are fertile and useful ideas but we must beware not to employ them incorrectly. Any heap of iron ore can be called a potential sword. This is a mode of speaking which expresses the possibility that the ore can be changed somehow into a sword. But the sword does not exist at all, not even as a latent quality of the ore. The ore has no latent qualities of that kind. Those qualities of the ore which represent the potential sword are very patent to everybody who knows the art of using them properly and changing them into an actual sword.

We may say that the hen's egg contains a potential chick ; but this is a mere mode of speech devised to say that the egg can be changed into a chick under certain conditions. There is no chick at all contained in the egg and nothing that is like a chick.

Evolution is not, as the name suggests, a process of unfolding ; evolution is, as Christian Friedrich Wolff calls it, an "epigenesis," i. e. the process of the additional growth of new formations. The chick is something different in kind from the egg. The unity of the egg-cell organism in the yolk is radically different from the unity of the full-fledged chick. The former shows traces of irritability but not of consciousness, while the latter exhibits unmistakable symptoms of psychical activity. The formation of the chicken-soul is a new formation as much as the growth of feathers. The feathers of the chick are an additional growth ; there are no latent feathers in the egg. We might express ourselves to the effect that the egg contains the potential existence of feathers, but with the same logic we might say the egg contains a potential chicken broth.

It is however true that something remains constant in the process of growth. There is a preservation of form in the constant change of material particles and this is the physiological basis of memory, so that a man of eighty may say "I remember when I was a child," although not one particle of the substance of which the child consisted is left in him. The continuity produced through this preservation of form makes growth and evolution possible.

The preservation of memory-structures constitutes the possibility of reviving the feelings of the past, it constitutes a preservation of soul. The material parts of the body are thrown out but the form being preserved, the soul remains. And this preservation of the soul is the basis of its additional growth through new and enlarged experience. The soul of the child is not lost in the man, it is preserved. It has lost certain features and at the same time it has gained new features, it has developed, and the unity of the soul has more or less changed with the development.

What is true of the individual is also true of mankind. Mankind as a whole is different in the savage and in civilised society. Nevertheless the latter has developed from the former. Certain traits have been dropped, other radically new features have appeared. That which was valuable in the soul of primitive man is not lost. The better part of his soul still lives in the highest developed man of to-day; the continuity is preserved. And to-day all our moral instruction aims at this, so to live that our souls also will be preserved in the future evolution of humanity. The gist of ethics is to make the soul immortal.*

X. PROFESSOR MACH'S POSITION.

The problem, "Are there things in themselves?" is closely connected with the subject of my discussion with Professor Mach. Professor Mach as well as myself are aspiring to arrive at a consistent and harmonious or unitary world-conception. Both of us recognise that things in themselves have no room in a monistic philosophy, both of us recognise that concepts are means only of orientation, they are the mental tools of living beings developed as an assistance in dealing with the surrounding world. They are symbols in which the processes of nature are copied and imitated and which can serve for planning or modeling and thus predetermining the course of nature. So far we agree, but then there appears a difference which it is difficult for me to understand or formulate in precise terms.

Professor Mach objects to the dualism of motion and feeling, which he declares he conceives as a unity not as a duality. But so do I. It appears to me that we must differ somehow in the method of constructing the unity. I see indeed a contrast of physical and of psychical. This contrast, however, in my conception does not belong to the object but to the subject. It is a contrast of our conception of things, but it is not a contrast existing objectively in the real things themselves. The world is not composed of the psychical and the

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*The abandonment of the ego as a metaphysical being is not, as it appears to many, a surrender of the soul or of its immortality. That the immortality of the soul from the standpoint of modern psychology is preserved, that it appears in a new light, grander and nobler than before, and that this conception of immortality is of an enormous practical importance, have been the main incentives of Mr. E. C. Hegeler in founding *The Open Court* and *The Monist*.

physical, but certain features of the world are called physical, and others psychical. Both terms are abstracts.

Professor Mach said in his first article and repeats it again in the present article that his former standpoint resembles very closely my present standpoint. When reading Professor Mach's lectures of 1863, I took pains to look for the similarity, and finding many things in which I could agree I dropped the differences taking the agreements as the essential points. In reading, however, Professor Mach's résumé of his former position as stated in this present article, I find that he attaches prominence to several points which I cannot endorse. I do not accept the theory that atoms feel, that they are endowed with consciousness. I have never spoken of atoms when dealing with psychological problems. The term "atom" is a chemical term invented as a help for thinking the equivalence of the weight of the elements which always combine in definite proportions. The term "atom" has in my opinion no sense if applied to other phenomena. The term "atom" has not been abstracted from psychical phenomena nor has it been invented for describing them. There is accordingly no probability that it can find there any appropriate application. We might as well expect that mathematical terms such as lines, points, circles, etc., are applicable in psychology. The idea of conscious circles or points can not in my mind be more absurd than that of conscious atoms. The rule must be observed that we can use abstractions made for a special purpose for that purpose only; they will not serve any other purpose as well. It is true that they are often employed as analogies, but in such cases, we must bear in mind that we are dealing with mere analogies.

In addition to the impropriety of using the term atoms in psychology, it appears to me erroneous to attribute feeling or anything like feeling to physical processes of any description. Natural processes are so constituted, that under certain conditions, such as take place in animal organisms, they will develop feelings. Clifford speaks in this sense of the elements of feeling. Lloyd Morgan calls it metakinesis, and I find that feelings being simply states of awareness represent the subjectivity of natural processes. We have reasons to suppose that in the processes of unorganised nature this subjectivity is neither feeling nor anything like feeling: but the subjectivity of the natural processes is as it were the stuff out of which our own feelings are formed.

I accept all the arguments of Professor Mach that our ideas are artificial products; and I am also anxious to distinguish in our ideas between that which describes facts and that which has been added to the description of facts in shape of theories or conjectures.

The sense-pictures of objects and ideas also are not things but images and symbols of things created for the purpose of representing things; they are as Prof. Lloyd Morgan says, "constructs." But these constructs are not mere fancy, they are not air-castles. They are constructed in order to imitate certain realities. Now, in building these constructs as an imitation or a copy of reality, we are often at a loss how to build them. There is for instance in the objective reality observed, a something somewhere high in the air, the basis of which is invisible, and being limited in our means of acquiring information we are ignorant of the real state of things. So in reconstructing or imitating the facts, we build scaffolds to support it, and we are too apt to forget that these scaffolds do not represent objective facts but are artifices to make certain facts, which we know in parts only, thinkable, i. e. representable without breaks in mental constructs.

XI. TRUTH IN MYTHOLOGY.

There is one point which I have emphasised and which it appears to me Professor Mach neglects, namely that our noumenal world of ideas has an objective meaning. The ideal constructs represent realities. They do not consist of scaffolds alone and there is no scaffold which has not been erected to help in building up representations of facts. Let us call the representation of facts positive science or simply truth and the scaffolding the mythology of science, and we shall see that the road to truth leads everywhere through mythology. Certain facts of the surrounding world impress themselves upon a sentient being and these impressions come to represent facts. These facts are not seen at once in their causal connection, they appear unconnected among themselves, and in the attempt to formulate them, to represent them, to construct them in mental images, we fill out the gaps of our knowledge with such inventions as are supplied by analogy.

Mythology is, in religion as well as in science, the indispensable ladder to truth. We cannot build without scaffolds. So we cannot construct truth without mythology. We have to introduce allegorical expressions in order to fill out gaps with analogies.

Mythology becomes fatal to the building up of truth, as soon as we consider it as truth itself. The scaffold is erected simply as an assistance for building and if the building is finished the scaffold should be torn down. The progress of science which is so much helped by mythology has periods of purification in which the mythology is discarded. This is sometimes a difficult task, because the very terms of science are mostly both at the same time truth and mythology, building-stones and scaffold.

Take, for instance, the term atom. The chemist observes that the elements always combine in certain proportions and formulates the law of the equivalence of their atomic weights. In order to think this process, to reconstruct it in mental images, he imagines that matter consists of infinitely small particles of constant weight. This is a fiction useful for its purpose but it may be just as erroneous as the method employed in the infinitesimal calculus of thinking of a continuous curve as consisting of a broken line of infinitely small parts, or of thinking of a certain force as being composed of a parallelogram of forces. The parallelogram of forces is a scaffold helpful for representing in mental symbols the coexistence of different abstractions of the same kind (e. g. motions of a different velocity and direction). But this scaffold is not a mere scaffold, it is not erected without any purpose, its final aim is the description of facts.

The proposition to consider light as rays traveling in straight lines is a scaffold, it is mythology ; but this analogy contains a truth, it contains a real building-stone which should not be torn down with the scaffold. This truth is one-sided ; it represents one feature of light and disregards other features. It disregards entirely the transversal oscillations of the ether, yet it describs another feature—viz., the transmission and refraction of light for the comprehension of which we need not take into consideration the undulation theory. The physicist calculates with his formula $\sin\alpha/\sin\beta = n$ the angle of refraction. There is certainly neither a sine α nor a sine β in reality, but there are certain relations of reality which are described in these expressions and the action of the light has a definite quality which can be determined with the assistance of the formula $\sin\alpha/\sin\beta = n$.

If the scientist succeeds in determining such real qualities of things, even though it be done with the assistance of mythology, he discovers a truth. He has with the help of his scaffolds succeeded in placing a building-stone where it belongs.

Some scaffolds have to be torn down because they hinder further building ; other scaffolds must remain because they assist us in modeling, and planning, and predetermining certain processes of nature. They are like staircases which enable us to reach with ease otherwise inaccesible places on towers or domes.

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The idea that science is full of mythology appears strange to the non-scientific, and it is often overlooked by scientists themselves. But the idea that religious mythology in spite of its many irrational superstitions and wrong analogies beams with truth is also little heeded by the many. In fact, man's method of reaching truth is the same in religion as in science.

The religious ideas such as God and soul are mental constructs which copy certain realities ; but these very terms, such as they are used, are mythological expressions ; they are still surrounded by their scaffolds. Many people know by their own experience the usefulness and indispensability of the scaffold. Without the scaffold they would never have had an inkling of the truth, for the representation of which it was built, and it is natural that they consider the scaffold as the building itself. This is the reason why the narrow-minded orthodox denounce anyone who would lay hand on or tear down any part of the scaffold, which has become a hindrance to the further development of religious ideals.

Positivism, i. e. the representation of facts without any admixture of theory or mythology, is an ideal which in its purity perhaps will never be realised. Nevertheless it is no *ignis fatuus*, no willo'-the-wisp that leads us astray. Our science is constantly more and more approaching this ideal and the progress of humanity is intimately connected with it.

Science has not merely a theoretic value, its aim and purpose consist in its application to practical life. Science is throughout ethical. Thus ethics has also its mythological phase. In agreement with Professor Mach (p. 204), we should find it ridiculous if one who presumes to be an ethical teacher of mankind would say:

> "Man *must* not be descended from monkeys," "The earth *shall* not rotate," "Matter *ought* not everywhere to fill space," "Energy *must* be constant," and so on.

Why is it ridiculous? Because we cannot prescribe a certain deportment to facts. It is however not ridiculous to let a precise and carefully sifted knowledge of facts determine our own deportment.

Science has to teach ethics. But here also we should distinguish between positive facts and mythology. Ethics based upon mere theories, upon our interpretations of nature which we add to facts, is mythological; positive ethics is simply that deportment which is suggested by a comprehension of the facts themselves.

Mythological ethics may be quite correct, just as much so as the application of a mythological theory of science may be within certain limits reliable as a working hypothesis. But it is desirable to understand the nature of mythological ethics in order to distinguish between truth and fiction.

When Professor Mach speaks of sensations as being the elements of the world and of things as being complexes of these elements he apparently does not use the word sensation in its usual sense. It has ceased to be an abstract term which represents one feature only of a process of nature and has become a symbol for an entire reality. And is not such a usage of terms as if they were not abstracts but the things themselves liable to lead to misconceptions?

Professor Mach's "elements," it seems to me, are only elements, i. e. ultimate and unanalysable materials, if considered as terms of a psychological view of the world; they are not elements in the domains of other abstractions, such as are made by physiology or physics. Moreover, although this method eliminates the duality of soul and body, mind and matter, feeling and motion, it does not explain the problem.

Professor Mach might answer that the problem as to the duality of mind and matter is a sham problem, just as much as the problem why do we see things upright when the retina picture of the eye shows the things inverted? But a problem is to him who has solved the problem always a sham problem. Every problem disappears as a problem as soon as it is solved. It is true that we see as little with the blind spot of the eye as with the skin of our back. The problem of the blind spot is not why do we not see with the blind spot, (which is simply a matter of fact,) but why do we not notice, when using only one eye, its lack of sight in a spot surrounded with sight-seeing structures? We have to employ artificial means to convince ourselves that we are really blind in that spot!

All problems are merely subjective; they are a conflict between two conceptions and as Professor Mach himself says, the solution of problems consists in the adaptation of thought to facts, i. e. to new facts or new views of facts. By an adaptation of our thought to the enlarged field of vision the problem vanishes; it has ceased to be a problem. In fact it never existed as an objective phenomenon. There are no problems in nature. There are problems only to the investigating mind. But even the formulation of problems is a problem to be solved, and perhaps the most difficult and subtle kind of problems is to discover the flaw in wrongly formulated problems.

The problem of the duality of body and soul, matter and mind, feeling and motion, ceases to be a problem to him who has worked his way through to a monistic conception, but to those who have not as yet succeeded in establishing a unitary view of these ideas, because they take them to be separate and distinct existences, it is a problem of great importance.

XII. THE ONENESS OF SUBJECTIVITY AND OBJECTIVITY.

The world is not rigid being, but activity, not absolute existence but a system of changing relations, not an abstract *Sein* but a concrete *Wirklichkeit*—a constant working of cause and effect. There is no dualism in this, for the *Wirklichkeit* is one and undivided.

Yet every relation admits of two standpoints, just as the line *AB*, which may serve to represent a certain and definite relation, is determinable from both ends, *A* as well as *B*. Let us call *A* the subject and *B* the object. Neither *A* nor *B* is a reality, a whole complete *Wirklichkeit*. A thing in order to be real must be active, it must work, it must stand in relation to something else. *A* is a mere mathematical point, but *AB* representing a process does something, it performs work, it is real. A thing in itself, if it could exist at all, would be tantamount to non-existence, it would represent a *Sein* without being *Wirklichkeit*. When bearing this in mind, it appears natural that the oneness of existence, representable in such relations as is that of $AB = -BA$ will admit of two standpoints, *BA* representing subjectivity, and *AB* representing objectivity. We can consider the relation of the world at large to one special point (which latter may in its turn stand for a whole system of relations) or vice versa the relation of this point to the world at large. The former standpoint is that of the microcosm, or the soul, the latter that of the macrocosm or the universe; the former results in awareness, the latter appears as matter in motion. The former is subjectivity, the latter objectivity.

Reality must not be conceived of as being a compound of the elements of feeling and of motion, of subjectivity and objectivity or of kinesis and metakinesis. I do not think there are atoms one-half of which contains the potentiality of sentience while the other half is freighted with energy. I conceive of reality as being one throughout, but, being throughout resolvable in relations, it will as a matter of course have two sides. What these two sides are like can be known through experience only, and experience teaches that under certain conditions the subjective side develops into feeling and consciousness, while the objective side is represented in the feeling of conscious beings as motions.

This view explains the duality of our conception of psychophysical facts, but it is certainly not dualism. The duality belongs to the scaffold not to the facts themselves. The facts can only be thought of as being one and undivided, and no conception can stand except it be monistic.

Subjectivity and objectivity are terms that express relations and not things in themselves. There are, however, philosophers who show a great grief unless either the subjectivity of being, or the objectivity of being, or the unities in which things or personalities are gathered up, are considered as things in themselves. All those features of reality which appear to their conception unexplainable, such as the relations that obtain among things and especially the thoughts of thinking beings are supposed to be the effects of some transcendental entity, of a thing in itself. And if a philosophy denies the existence of transcendentalistic thought-entities or of any such things in themselves, which serve as cement to combine the *disjecta membra* of their world-conception, it is generally declared to lead straight on to nihilism—not because the world itself but because their world-system would thereby be annihilated.

All things that exist, if considered as separate things, will pass away; but if considered as parts of the all-existence of reality, they are eternal. In fact things are not separate things, in the sense of isolated, absolute, or abstract beings, although we may speak of them as such for our ephemeral purposes. All things that exist, the human soul included, are and will remain parts of the One and All.

This destroys their individuality as little as a brick ceases to be a brick because it serves its part in the building of a dome. The soul of a man if his life be well spent, is not annihilated in death, his soul has become a living stone in the temple of humanity. It continues to live and marches on in the general progress of the race.

We are parts of a great whole now, and we shall remain parts of the same great whole forever. We have never been and shall never be transcendental selfhoods or metaphysical egos, or any kind of things in themselves. Our personality is real life, it is actual being. As such it is bound up in the universal life of the One and All and no particle of it will be lost. We need not fear death, for the air we breathe is immortality.

EDITOR.